

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Units	95% UCL			
		RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8
<b>Metals</b>					
Aluminum	mg/kg dw	12443.71	9682.98	9448.21	9196.69
Antimony	mg/kg dw	0.67	1.61	1.11	0.37
Arsenic	mg/kg dw	8.83	6.54	21.13	9.81
Barium	mg/kg dw	119.53	166.80	159.97	269.80
Beryllium	mg/kg dw	0.61	0.48	0.56	0.64
Cadmium	mg/kg dw	2.18	1.71	3.88	2.17
Chromium	mg/kg dw	58.48	58.34	137.41	125.40
Cobalt	mg/kg dw	9.29	7.52	7.45	6.96
Copper	mg/kg dw	92.09	63.16	97.27	101.98
Iron	mg/kg dw	23341.92	19582.41	19475.12	19179.84
Lead	mg/kg dw	99.20	259.17	16324.83	295.71
Manganese	mg/kg dw	420.39	349.62	370.37	372.78
Mercury	mg/kg dw	0.20	0.18	0.81	0.27
Nickel	mg/kg dw	42.16	34.78	40.94	23.10
Selenium	mg/kg dw	2.44	1.78	2.38	4.93
Silver	mg/kg dw	0.65	0.97	1.99	8.22
Thallium	mg/kg dw	4.96	5.22	3.66	6.52
Vanadium	mg/kg dw	28.44	23.22	22.90	26.55
Zinc	mg/kg dw	243.00	287.76	314.58	612.02
<b>Conventionals</b>					
Cyanide	mg/kg dw	0.22	0.26	0.58	2.57
<b>PAHs</b>					
Anthracene	mg/kg dw	3.375	3.043	5.218	9.655
Benzo[a]anthracene	mg/kg dw	2.907	3.195	1.920	5.913
Benzo[a]pyrene	mg/kg dw	3.109	2.828	1.827	6.385
Benzo[b]fluoranthene	mg/kg dw	2.969	2.379	2.453	7.317
Benzo[g,h,i]perylene	mg/kg dw	3.240	1.872	4.891	4.610
Benzo[k]fluoranthene	mg/kg dw	3.098	3.136	2.399	8.048
Chrysene	mg/kg dw	3.157	2.448	2.833	8.979
Dibenz[a,h]anthracene	mg/kg dw	3.735	2.983	5.218	9.575
Fluoranthene	mg/kg dw	4.452	4.744	4.389	20.153
Indeno[1,2,3-cd]pyrene	mg/kg dw	3.052	2.630	1.837	4.590

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Units	95% UCL			
		RM 0-3.2	RM 3.2-4.9	RM 4.9-6.5	RM 6.5-8.8
Phenanthrene	mg/kg dw	3.754	3.474	4.647	7.151
Pyrene	mg/kg dw	3.946	4.013	3.912	12.705
<b>PCBs</b>					
PCB Aroclor 1242	mg/kg dw	0.447	2.586	2.428	2.038
PCB Aroclor 1260	mg/kg dw	0.078	0.092	0.119	0.519
PCB (total)	mg/kg dw	0.53	2.68	2.55	2.56
<b>Organochlorine Pesticides</b>					
4,4'-DDD (p,p')	mg/kg dw	0.012	0.019	0.036	0.063
4,4'-DDE (p,p')	mg/kg dw	0.015	0.028	0.041	0.034
4,4'-DDT (p,p')	mg/kg dw	0.004	0.004	0.013	0.014
Aldrin	mg/kg dw	0.015	0.070	0.042	0.011
alpha-Chlordane	mg/kg dw	0.005	0.006	0.014	0.018
delta-BHC	mg/kg dw	0.002	0.006	0.012	0.001
Dieldrin	mg/kg dw	0.015	0.023	0.013	0.015
Endosulfan II	mg/kg dw	0.004	0.012	0.014	0.028
Endrin ketone	mg/kg dw	0.004	0.006	0.007	0.036
gamma-Chlordane	mg/kg dw	0.011	0.018	0.017	0.008
Heptachlor	mg/kg dw	0.004	0.007	0.003	0.001
Heptachlor epoxide	mg/kg dw	0.020	0.058	0.026	0.017
<b>Semivolatile Organics</b>					
bis(2-Ethylhexyl)phthalate	mg/kg dw	3.203	6.820	5.239	23.341
Di-n-octylphthalate	mg/kg dw	3.761	4.321	5.049	1.924
<b>Auxiliary Parameters</b>					
Total Organic Carbon (95% LCL or minimum)	%	4.5	3.7	5.5	5.8

<sup>1</sup>Units are mg/kg OC for PCBs, organochlorine pesticides, and PAHs; mg/kg dw sediment for all other chemicals.

<sup>2</sup>The sediment guidelines expressed on an OC basis are adjusted in the HQ calculations using the mean TOC concentration for each river segment.

dw = dry weight

OC = Organic Carbon

RM = River Mile

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Sediment Guidelines									Di Toro et al (2000) C <sub>SQG</sub> (mg/kg OC) <sup>2</sup>	
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)				
	ERL (mg/kg dw)	ERM (mg/kg dw)	TEL (mg/kg dw)	PEL (mg/kg dw)	TEL (mg/kg dw)	PEL (mg/kg dw)	LEL (mg/kg dw)	SEL (mg/kg) <sup>1,2</sup>			
<b>Metals</b>											
Aluminum	-	58,000	-	-	-	-	-	-	-	-	
Antimony	-	-	-	-	-	-	-	-	-	-	
Arsenic	13	50	11	48	5.9	17	6	33	-	-	
Barium	-	-	-	-	-	-	-	-	-	-	
Beryllium	-	-	-	-	-	-	-	-	-	-	
Cadmium	0.7	3.9	0.58	3.2	0.596	3.53	0.6	10	-	-	
Chromium	39	270	36	120	37.3	90	26	110	-	-	
Cobalt	-	-	-	-	-	-	-	-	-	-	
Copper	41	190	28	100	35.7	197	16	110	-	-	
Iron	200,000	280,000	190,000	250,000	-	-	20,000	40,000	-	-	
Lead	55	99	37	82	35	91.3	31	250	-	-	
Manganese	730	1,700	630	1,200	-	-	460	1,100	-	-	
Mercury	-	-	-	-	0.174	0.486	0.2	2	-	-	
Nickel	24	45	20	33	18	35.9	16	75	-	-	
Selenium	-	-	-	-	-	-	-	-	-	-	
Silver	-	-	-	-	-	-	-	-	-	-	
Thallium	-	-	-	-	-	-	-	-	-	-	
Vanadium	-	-	-	-	-	-	-	-	-	-	
Zinc	110	550	98	540	123	315	120	820	-	-	
<b>Conventional</b>											
Cyanide	-	-	-	-	-	-	-	-	-	-	
<b>PAHs</b>											
Anthracene	0.01	0.14	0.01	0.17	-	-	0.22	370	1005		
Benzo[a]anthracene	0.019	0.3	0.016	0.28	0.0317	0.385	0.32	1480	1422		
Benzo[a]pyrene	0.084	0.47	0.032	0.32	0.0319	0.782	0.37	1440	1633		
Benzo[b]fluoranthene	-	-	-	-	-	-	-	-	1656		
Benzo[g,h,i]perylene	0.013	0.28	0.016	0.25	-	-	0.17	0.32	1852		
Benzo[k]fluoranthene	-	-	-	-	-	-	0.24	1340	1659		
Chrysene	0.03	0.5	0.027	0.41	0.0571	0.862	0.34	460	1427		
Dibenz[a,h]anthracene	0.01	-	0.01	-	-	-	0.06	130	1899		
Fluoranthene	0.033	0.18	0.031	0.32	0.111	2.355	0.75	1020	1196		
Indeno[1,2,3-cd]pyrene	0.03	0.25	0.017	0.24	-	-	0.2	320	1887		

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Sediment Guidelines								Di Toro et al (2000) C <sub>SQG</sub> (mg/kg OC) <sup>2</sup>	
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)			
	ERL (mg/kg dw)	ERM (mg/kg dw)	TEL (mg/kg dw)	PEL (mg/kg dw)	TEL (mg/kg dw)	PEL (mg/kg dw)	LEL (mg/kg dw)	SEL (mg/kg) <sup>1,2</sup>		
Phenanthrene	0.027	0.35	0.019	0.41	0.0419	0.515	0.56	950	1008	
Pyrene	0.04	0.35	0.044	0.49	0.053	0.875	0.49	850	1180	
<b>PCBs</b>										
PCB Aroclor 1242	-	-	-	-	-	-	-	-	-	
PCB Aroclor 1260	-	-	-	-	-	-	0.005	24	-	
PCB (total)	0.05	0.73	0.032	0.24	0.0341	0.277	0.07	530	-	
<b>Organochlorine Pesticides</b>										
4,4'-DDD (p,p')	-	-	-	-	0.00354	0.00851	0.008	6	-	
4,4'-DDE (p,p')	-	-	-	-	0.00142	0.00675	0.005	19	-	
4,4'-DDT (p,p')	-	-	-	-	0.00698	4.45	0.007	12	-	
Aldrin	-	-	-	-	-	-	0.002	8	-	
alpha-Chlordane	-	-	-	-	-	-	-	-	-	
delta-BHC	-	-	-	-	-	-	-	-	-	
Dieldrin	-	-	-	-	0.00285	0.00667	0.002	91	-	
Endosulfan II	-	-	-	-	-	-	-	-	-	
Endrin ketone	-	-	-	-	-	-	-	-	-	
gamma-Chlordane	-	-	-	-	-	-	-	-	-	
Heptachlor	-	-	-	-	-	-	-	-	-	
Heptachlor epoxide	-	-	-	-	0.0006	0.00274	0.005	5	-	
<b>Semivolatile Organics</b>										
bis(2-Ethylhexyl)phthalate	-	-	-	-	-	-	-	-	-	
Di-n-octylphthalate	-	-	-	-	-	-	-	-	-	
<b>Auxiliary Parameters</b>										
Total Organic Carbon (95% LCL or minimum)	-	-	-	-	-	-	-	-	-	

<sup>1</sup>Units are mg/kg OC for PCBs, organochlorine pesticides

<sup>2</sup>The sediment guidelines expressed on an OC basis are

dw = dry weight

OC = Organic Carbon

RM = River Mile

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 0-3.2								
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		Di Toro et al (2000)
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
<b>Metals</b>									
Aluminum	-	0.21	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-
Arsenic	0.68	0.18	0.80	0.18	1.50	0.52	1.47	0.27	-
Barium	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-
Cadmium	3.11	0.56	3.76	0.68	3.66	0.62	3.63	0.22	-
Chromium	1.50	0.22	1.62	0.49	1.57	0.65	2.25	0.53	-
Cobalt	-	-	-	-	-	-	-	-	-
Copper	2.25	0.48	3.29	0.92	2.58	0.47	5.76	0.84	-
Iron	0.12	0.08	0.12	0.09	-	-	1.17	0.58	-
Lead	1.80	1.00	2.68	1.21	2.83	1.09	3.20	0.40	-
Manganese	0.58	0.25	0.67	0.35	-	-	0.91	0.38	-
Mercury	-	-	-	-	1.15	0.41	1.00	0.10	-
Nickel	1.76	0.94	2.11	1.28	2.34	1.17	2.64	0.56	-
Selenium	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-
Zinc	2.21	0.44	2.48	0.45	1.98	0.77	2.03	0.30	-
<b>Conventionals</b>									
Cyanide	-	-	-	-	-	-	-	-	-
<b>PAHs</b>									
Anthracene	337.55	24.11	337.55	19.86	-	-	15.34	0.20	0.07
Benzo[a]anthracene	152.99	9.69	181.68	10.38	91.70	7.55	9.08	0.04	0.05
Benzo[a]pyrene	37.01	6.62	97.16	9.72	97.47	3.98	8.40	0.05	0.04
Benzo[b]fluoranthene	-	-	-	-	-	-	-	-	0.04
Benzo[g,h,i]perylene	249.21	11.57	202.49	12.96	-	-	19.06	224.71	0.04
Benzo[k]fluoranthene	-	-	-	-	-	-	12.91	0.05	0.04
Chrysene	105.22	6.31	116.92	7.70	55.28	3.66	9.28	0.15	0.05
Dibenz[a,h]anthracene	373.54	-	373.54	-	-	-	62.26	0.64	0.04
Fluoranthene	134.92	24.74	143.63	13.91	40.11	1.89	5.94	0.10	0.08
Indeno[1,2,3-cd]pyrene	101.75	12.21	179.56	12.72	-	-	15.26	0.21	0.04

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 0-3.2								
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		Di Toro et al (2000)
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
Phenanthrene	139.03	10.73	197.57	9.16	89.59	7.29	6.70	0.09	0.08
Pyrene	98.65	11.27	89.68	8.05	74.45	4.51	8.05	0.10	0.07
<b>PCBs</b>									
PCB Aroclor 1242	-	-	-	-	-	-	-	-	-
PCB Aroclor 1260	-	-	-	-	-	-	15.66	0.07	-
PCB (total)	10.50	0.72	16.41	2.19	15.40	1.90	7.50	0.00	-
<b>Organochlorine Pesticides</b>									
4,4'-DDD (p,p')	-	-	-	-	3.50	1.46	1.55	0.05	-
4,4'-DDE (p,p')	-	-	-	-	10.86	2.29	3.08	0.02	-
4,4'-DDT (p,p')	-	-	-	-	0.63	0.00	0.63	0.01	-
Aldrin	-	-	-	-	-	-	7.52	0.04	-
alpha-Chlordane	-	-	-	-	-	-	-	-	-
delta-BHC	-	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	5.33	2.28	7.60	0.00	-
Endosulfan II	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	-	-	33.45	7.32	4.01	0.09	-
<b>Semivolatile Organics</b>									
bis(2-Ethylhexyl)phthalate	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-	-	-
<b>Auxiliary Parameters</b>									
Total Organic Carbon (95% LCL or minimum)	-	-	-	-	-	-	-	-	-

<sup>1</sup>Units are mg/kg OC for PCBs, organochlorine pesticides

<sup>2</sup>The sediment guidelines expressed on an OC basis are

dw = dry weight

OC = Organic Carbon

RM = River Mile

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 3.2-4.9								
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		Di Toro et al (2000)
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
<b>Metals</b>									
Aluminum	-	0.17	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-
Arsenic	0.50	0.13	0.59	0.14	1.11	0.38	1.09	0.20	-
Barium	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-
Cadmium	2.44	0.44	2.95	0.53	2.87	0.48	2.85	0.17	-
Chromium	1.50	0.22	1.62	0.49	1.56	0.65	2.24	0.53	-
Cobalt	-	-	-	-	-	-	-	-	-
Copper	1.54	0.33	2.26	0.63	1.77	0.32	3.95	0.57	-
Iron	0.10	0.07	0.10	0.08	-	-	0.98	0.49	-
Lead	4.71	2.62	7.00	3.16	7.40	2.84	8.36	1.04	-
Manganese	0.48	0.21	0.55	0.29	-	-	0.76	0.32	-
Mercury	-	-	-	-	1.02	0.37	0.89	0.09	-
Nickel	1.45	0.77	1.74	1.05	1.93	0.97	2.17	0.46	-
Selenium	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-
Zinc	2.62	0.52	2.94	0.53	2.34	0.91	2.40	0.35	-
<b>Conventionals</b>									
Cyanide	-	-	-	-	-	-	-	-	-
<b>PAHs</b>									
Anthracene	304.29	21.74	304.29	17.90	-	-	13.83	0.22	0.08
Benzo[a]anthracene	168.16	10.65	199.69	11.41	100.79	8.30	9.98	0.06	0.06
Benzo[a]pyrene	33.67	6.02	88.38	8.84	88.66	3.62	7.64	0.05	0.05
Benzo[b]fluoranthene	-	-	-	-	-	-	-	-	0.04
Benzo[g,h,i]perylene	144.03	6.69	117.02	7.49	-	-	11.01	159.25	0.03
Benzo[k]fluoranthene	-	-	-	-	-	-	13.07	0.06	0.05
Chrysene	81.60	4.90	90.67	5.97	42.87	2.84	7.20	0.14	0.05
Dibenz[a,h]anthracene	298.27	-	298.27	-	-	-	49.71	0.62	0.04
Fluoranthene	143.77	26.36	153.05	14.83	42.74	2.01	6.33	0.13	0.11
Indeno[1,2,3-cd]pyrene	87.67	10.52	154.71	10.96	-	-	13.15	0.22	0.04

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 3.2-4.9								Di Toro et al (2000)
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
Phenanthrene	128.68	9.93	182.86	8.47	82.92	6.75	6.20	0.10	0.09
Pyrene	100.33	11.47	91.21	8.19	75.72	4.59	8.19	0.13	0.09
<b>PCBs</b>									
PCB Aroclor 1242	-	-	-	-	-	-	-	-	-
PCB Aroclor 1260	-	-	-	-	-	-	18.32	0.10	-
PCB (total)	53.55	3.67	83.67	11.16	78.52	9.67	38.25	0.01	-
<b>Organochlorine Pesticides</b>									
4,4'-DDD (p,p')	-	-	-	-	5.45	2.27	2.41	0.09	-
4,4'-DDE (p,p')	-	-	-	-	19.44	4.09	5.52	0.04	-
4,4'-DDT (p,p')	-	-	-	-	0.55	0.00	0.55	0.01	-
Aldrin	-	-	-	-	-	-	35.00	0.24	-
alpha-Chlordane	-	-	-	-	-	-	-	-	-
delta-BHC	-	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	8.21	3.51	11.70	0.01	-
Endosulfan II	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	-	-	96.34	21.10	11.56	0.31	-
<b>Semivolatile Organics</b>									
bis(2-Ethylhexyl)phthalate	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-	-	-
<b>Auxiliary Parameters</b>									
Total Organic Carbon (95% LCL or minimum)	-	-	-	-	-	-	-	-	-

<sup>1</sup>Units are mg/kg OC for PCBs, organochlorine pesticides

<sup>2</sup>The sediment guidelines expressed on an OC basis are

dw = dry weight

OC = Organic Carbon

RM = River Mile

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 4.9-6.5								
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		Di Toro et al (2000)
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
<b>Metals</b>									
Aluminum	-	0.16	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-
Arsenic	1.63	0.42	1.92	0.44	3.58	1.24	3.52	0.64	-
Barium	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-
Cadmium	5.54	0.99	6.69	1.21	6.51	1.10	6.46	0.39	-
Chromium	3.52	0.51	3.82	1.15	3.68	1.53	5.29	1.25	-
Cobalt	-	-	-	-	-	-	-	-	-
Copper	2.37	0.51	3.47	0.97	2.72	0.49	6.08	0.88	-
Iron	0.10	0.07	0.10	0.08	-	-	0.97	0.49	-
Lead	296.82	164.90	441.21	199.08	466.42	178.80	526.61	65.30	-
Manganese	0.51	0.22	0.59	0.31	-	-	0.81	0.34	-
Mercury	-	-	-	-	4.63	1.66	4.03	0.40	-
Nickel	1.71	0.91	2.05	1.24	2.27	1.14	2.56	0.55	-
Selenium	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-
Zinc	2.86	0.57	3.21	0.58	2.56	1.00	2.62	0.38	-
<b>Conventionals</b>									
Cyanide	-	-	-	-	-	-	-	-	-
<b>PAHs</b>									
Anthracene	521.76	37.27	521.76	30.69	-	-	23.72	0.26	0.09
Benzo[a]anthracene	101.04	6.40	119.99	6.86	60.56	4.99	6.00	0.02	0.02
Benzo[a]pyrene	21.75	3.89	57.08	5.71	57.26	2.34	4.94	0.02	0.02
Benzo[b]fluoranthene	-	-	-	-	-	-	-	-	0.03
Benzo[g,h,i]perylene	376.20	17.47	305.66	19.56	-	-	28.77	276.69	0.05
Benzo[k]fluoranthene	-	-	-	-	-	-	10.00	0.03	0.03
Chrysene	94.43	5.67	104.92	6.91	49.61	3.29	8.33	0.11	0.04
Dibenz[a,h]anthracene	521.76	-	521.76	-	-	-	86.96	0.73	0.05
Fluoranthene	132.99	24.38	141.57	13.71	39.54	1.86	5.85	0.08	0.07
Indeno[1,2,3-cd]pyrene	61.24	7.35	108.06	7.65	-	-	9.19	0.10	0.02

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 4.9-6.5								
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		Di Toro et al (2000)
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
Phenanthrene	172.11	13.28	244.58	11.33	110.91	9.02	8.30	0.09	0.08
Pyrene	97.81	11.18	88.91	7.98	73.82	4.47	7.98	0.08	0.06
<b>PCBs</b>									
PCB Aroclor 1242	-	-	-	-	-	-	-	-	-
PCB Aroclor 1260	-	-	-	-	-	-	23.72	0.09	-
PCB (total)	50.93	3.49	79.57	10.61	74.67	9.19	36.38	0.00	-
<b>Organochlorine Pesticides</b>									
4,4'-DDD (p,p')	-	-	-	-	10.19	4.24	4.51	0.11	-
4,4'-DDE (p,p')	-	-	-	-	28.90	6.08	8.21	0.04	-
4,4'-DDT (p,p')	-	-	-	-	1.91	0.00	1.90	0.02	-
Aldrin	-	-	-	-	-	-	20.88	0.09	-
alpha-Chlordane	-	-	-	-	-	-	-	-	-
delta-BHC	-	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	4.66	1.99	6.63	0.00	-
Endosulfan II	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	-	-	43.59	9.55	5.23	0.09	-
<b>Semivolatile Organics</b>									
bis(2-Ethylhexyl)phthalate	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-	-	-
<b>Auxiliary Parameters</b>									
Total Organic Carbon (95% LCL or minimum)	-	-	-	-	-	-	-	-	-

<sup>1</sup>Units are mg/kg OC for PCBs, organochlorine pesticides

<sup>2</sup>The sediment guidelines expressed on an OC basis are

dw = dry weight

OC = Organic Carbon

RM = River Mile

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 6.5-8.8								
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		Di Toro et al (2000)
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
<b>Metals</b>									
Aluminum	-	0.16	-	-	-	-	-	-	-
Antimony	-	-	-	-	-	-	-	-	-
Arsenic	0.75	0.20	0.89	0.20	1.66	0.58	1.64	0.30	-
Barium	-	-	-	-	-	-	-	-	-
Beryllium	-	-	-	-	-	-	-	-	-
Cadmium	3.10	0.56	3.74	0.68	3.64	0.61	3.61	0.22	-
Chromium	3.22	0.46	3.48	1.05	3.36	1.39	4.82	1.14	-
Cobalt	-	-	-	-	-	-	-	-	-
Copper	2.49	0.54	3.64	1.02	2.86	0.52	6.37	0.93	-
Iron	0.10	0.07	0.10	0.08	-	-	0.96	0.48	-
Lead	5.38	2.99	7.99	3.61	8.45	3.24	9.54	1.18	-
Manganese	0.51	0.22	0.59	0.31	-	-	0.81	0.34	-
Mercury	-	-	-	-	1.55	0.55	1.35	0.13	-
Nickel	0.96	0.51	1.16	0.70	1.28	0.64	1.44	0.31	-
Selenium	-	-	-	-	-	-	-	-	-
Silver	-	-	-	-	-	-	-	-	-
Thallium	-	-	-	-	-	-	-	-	-
Vanadium	-	-	-	-	-	-	-	-	-
Zinc	5.56	1.11	6.25	1.13	4.98	1.94	5.10	0.75	-
<b>Conventionals</b>									
Cyanide	-	-	-	-	-	-	-	-	-
<b>PAHs</b>									
Anthracene	965.47	68.96	965.47	56.79	-	-	43.89	0.45	0.17
Benzo[a]anthracene	311.23	19.71	369.58	21.12	186.54	15.36	18.48	0.07	0.07
Benzo[a]pyrene	76.02	13.59	199.54	19.95	200.17	8.17	17.26	0.08	0.07
Benzo[b]fluoranthene	-	-	-	-	-	-	-	-	0.08
Benzo[g,h,i]perylene	354.62	16.46	288.13	18.44	-	-	27.12	248.89	0.04
Benzo[k]fluoranthene	-	-	-	-	-	-	33.53	0.10	0.08
Chrysene	299.31	17.96	332.57	21.90	157.26	10.42	26.41	0.34	0.11
Dibenz[a,h]anthracene	957.50	-	957.50	-	-	-	159.58	1.27	0.09
Fluoranthene	610.70	111.96	650.10	62.98	181.56	8.56	26.87	0.34	0.29
Indeno[1,2,3-cd]pyrene	152.99	18.36	269.98	19.12	-	-	22.95	0.25	0.04

**Table C-6. Hazard quotients for aquatic life based on sediment exposures (Data from Inventory 20 [2000]).**

Chemical	Hazard Quotients - RM 6.5-8.8								Di Toro et al (2000)
	Ingersoll et al. (1996)				Environment Canada (1995)		Ontario (1993)		
	ERL	ERM	TEL	PEL	TEL	PEL	LEL	SEL	CSQG
Phenanthrene	264.85	20.43	376.37	17.44	170.67	13.89	12.77	0.13	0.12
Pyrene	317.62	36.30	288.75	25.93	239.72	14.52	25.93	0.26	0.19
<b>PCBs</b>									
PCB Aroclor 1242	-	-	-	-	-	-	-	-	-
PCB Aroclor 1260	-	-	-	-	-	-	103.89	0.37	-
PCB (total)	51.15	3.50	79.92	10.66	75.00	9.23	36.53	0.00	-
<b>Organochlorine Pesticides</b>									
4,4'-DDD (p,p')	-	-	-	-	17.81	7.41	7.88	0.18	-
4,4'-DDE (p,p')	-	-	-	-	24.22	5.10	6.88	0.03	-
4,4'-DDT (p,p')	-	-	-	-	1.98	0.00	1.97	0.02	-
Aldrin	-	-	-	-	-	-	5.30	0.02	-
alpha-Chlordane	-	-	-	-	-	-	-	-	-
delta-BHC	-	-	-	-	-	-	-	-	-
Dieldrin	-	-	-	-	5.26	2.25	7.50	0.00	-
Endosulfan II	-	-	-	-	-	-	-	-	-
Endrin ketone	-	-	-	-	-	-	-	-	-
gamma-Chlordane	-	-	-	-	-	-	-	-	-
Heptachlor	-	-	-	-	-	-	-	-	-
Heptachlor epoxide	-	-	-	-	28.04	6.14	3.36	0.06	-
<b>Semivolatile Organics</b>									
bis(2-Ethylhexyl)phthalate	-	-	-	-	-	-	-	-	-
Di-n-octylphthalate	-	-	-	-	-	-	-	-	-
<b>Auxiliary Parameters</b>									
Total Organic Carbon (95% LCL or minimum)	-	-	-	-	-	-	-	-	-

<sup>1</sup>Units are mg/kg OC for PCBs, organochlorine pesticides

<sup>2</sup>The sediment guidelines expressed on an OC basis are

dw = dry weight

OC = Organic Carbon

RM = River Mile